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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/821,025	03/19/97	BIJL	H 246152006900

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EXAMINER	
MARX, I	
ART UNIT	**PAPER NUMBER**
1651	33

DATE MAILED: 08/22/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary	Application No. 08/821,025	Applicant(s) Bijl et al.
	Examiner Irene Marx	Art Unit 1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jul 16, 2001*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-29, 31, 33-36, and 41-54* is/are pending in the application.

4a) Of the above, claim(s) *1-26 and 34-36* is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *27-29, 31, 33, and 41-54* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
18) ☐ Interview Summary (PTO-413) Paper No(s). _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

The amendment filed 8/8/01 is acknowledged. Claims 27-29, 31, 33 and 41-54 are being considered on the merits.

Claims 1-26 and 34-36 are withdrawn from consideration as directed to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 27, 28, 29, 37, 46, 54 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Parker *et al.*.

The claims are drawn to a granulated microbial composition which consists essentially of non-disrupted dead microorganisms..

The cited reference discloses a granulated microbial composition which appears to be identical to the presently claimed composition at least during some stage prior or during aggregation (see, e.g., Col. 2, lines 5-35) since it consists essentially of non-disrupted dead microorganisms which appear to be porous having an initial size of 5 to 20 μm.. The referenced composition appears to be identical to the presently claimed composition and is considered to anticipate the claimed composition since it is disclosed as being obtained from the same class of microorganism and appears to have the same form as that of the composition claimed. Consequently, the claimed composition appears to be anticipated by the reference.

In the alternative, even if the claimed composition is not identical to the referenced composition at least during some stage of the process with regard to some unidentified characteristics, the differences between that which is disclosed and that which is claimed are considered to be so slight that the referenced composition is likely to intrinsically possess the same characteristics of porosity as the claimed composition particularly in view of the similar

characteristics which they have been shown to share. Thus the claimed composition would have been obvious to those skilled in the art within the meaning of USC 103.

Furthermore, the composition is claimed as a product-by-process. Since the Patent and Trademark Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make comparisons therewith, a lesser burden of proof is required to make out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature than when a product is claimed in the conventional manner. MPEP 2113.

Accordingly, the claimed invention as a whole was at least prima facie obvious, if not anticipated by the reference, especially in the absence of evidence to the contrary.

Claims 27-29, 31, 33 and 41-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carduck *et al.* taken with Parker *et al.* and Dsiezak and further taken with Akimoto *et al.* and Casey *et al.*.

Carduck *et al.* teach a composition consisting essentially of non-disrupted microbial cells from a biomass which appear to have the required porous structure and dry matter content (See, e.g., col. 5, lines 24-30). The reference differs from the claimed material in that the cells are not dead. However, Parker *et al.* and Dsiezak adequately demonstrate that inactive yeasts are routinely used for nutritional purposes, for example (See, e.g.,Col. 2 and page 119, col. 3 et seq.). For example, in Dsiezak a process of pasteurization is used to inactivate the microorganisms. (See, e.g., page 119, col. 3, paragraph 2).

Therefore, one of ordinary skill in the art would have a compelling motivation to alter the product of Carduck *et al.* by killing the yeast by non-disruptive means such as pasteurization or UV radiation in order to obtain a more digestible product or a product suitable for extraction of desired compounds from the cells. It is noted that yeasts are a recognized rich source of vitamins and protein. It is submitted that the microorganisms obtained by Carduck *et al.* have a structure that on drying allows isolation or extraction of a desired compound, such as vitamins from the cells with a solvent through pores and/or channels, whether the cells are dead or alive.

The references differ from the claimed invention in the nature of the microorganisms involved and in the presence of specific compounds in these microorganisms. However, Akimoto

et al. adequately demonstrate that *Mortierella,* also a yeast, are known to contain polyunsaturated fatty acids such as arachidonic acid which can be extracted with a solvent (See, e.g., Table 1). In addition, the reference discloses that *Aspergillus* is also a suitable source of compounds that can be extracted with a solvent. It is also noted that

In addition, Casey *et al.* adequately demonstrate that *Pichia,* also a yeast, are known to contain tetraacetylsphingosine (TAPS) which can be extracted with a solvent (See, e.g., page 3, lines 32 et seq.).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the product of Carduck *et al.* or the products of each of Parker *et al.* and Dsiezak by selecting a other dried microbial granular product containing a useful chemical, such as further yeasts for fungi, including *Pichia* containing TAPS, as suggested by Casey *et al.* or *Mortierella* or *Aspergillus* as suggested by Akimoto for the expected benefits of providing a valuable dried granular product which is stable and easy to handle from which desired chemical compounds are extractable through the pores.

Thus, the claimed invention as a whole was clearly prima facie obvious, especially in the absence of evidence to the contrary.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irene Marx whose telephone number is (703) 308-2922.

If attempts to reach the examiner by telephone *are* unsuccessful, the examiner's supervisor, Michael Wityshyn, can be reached on (703) 308-4743. The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196 .

Irene Marx
Primary Examiner
Art Unit 1651